Oracle Talari E1000

Hardware Guide

Original Publication Date: Nov 1, 2019

Table of Contents

About This Document

This guide describes the physical characteristics of the Oracle Talari E1000 Adaptive Private Networking (APN) Appliance. It includes setting up the physical connections on front panel as well as how to mount this appliance in a rack. The intended audience of this document is a Network Administrator or a Network Operator.

My Oracle Support

My Oracle Support (https://support.oracle.com) is your initial point of contact for all product support and training needs. A representative at Customer Access Support (CAS) can assist you with My Oracle Support registration.

Call the CAS main number at 1-800-223-1711 (toll-free in the US), or call the Oracle Support hotline for your local country from the list at http://www.oracle.com/us/support/contact/index.html. When calling, make the selections in the sequence shown below on the Support telephone menu:

1. Select 2 for New Service Request.

2. Select 3 for Hardware, Networking, and Solaris Operating System Support.
3. Select one of the following options:
    - For technical issues such as creating a new Service Request (SR), select 1.
    - For non-technical issues such as registration or assistance with My Oracle Support, select 2.

You are connected to a live agent who can assist you with My Oracle Support registration and opening a support ticket.

My Oracle Support is available 24 hours a day, 7 days a week, 365 days a year.

Emergency Response

In the event of a critical service situation, emergency response is offered by the Customer Access Support (CAS) main number at 1-800-223-1711 (toll-free in the US), or call the Oracle Support hotline for your local country from the list at

http://www.oracle.com/us/support/contact/index.html. The emergency response provides immediate coverage, automatic escalation, and other features to ensure that the critical situation is resolved as rapidly as possible.

A critical situation is defined as a problem with the installed equipment that severely affects service, traffic, or maintenance capabilities, and requires immediate corrective action. Critical situations affect service and/or system operation resulting in one or several of these situations:

- A total system failure that results in loss of all transaction processing capability
- Significant reduction in system capacity or traffic handling capability
- Loss of the system's ability to perform automatic system reconfiguration
- Inability to restart a processor or the system
- Corruption of system databases that requires service affecting corrective actions
- Loss of access for maintenance or recovery operations
- Loss of the system ability to provide any required critical or major trouble notification

Any other problem severely affecting service, capacity/traffic, billing, and maintenance capabilities may be defined as critical by prior discussion and agreement with Oracle.

Locate Product Documentation on the Oracle Help Center Site

Oracle Communications customer documentation is available on the web at the Oracle Help Center (OHC) site, http://docs.oracle.com. You do not have to register to access these documents. Viewing these files requires Adobe Acrobat Reader, which can be downloaded at http://www.adobe.com.

1. Access the Oracle Help Center site at http://docs.oracle.com.
2. Click Industries.
3. Click the Oracle Communications link.

   Under the SD-WAN header, select a product.
4. Select the Release Number.

   A list of the entire documentation set for the selected product and release appears.

5. To download a file to your location, right-click the PDF link, select Save target as (or similar command based on your browser), and save to a local folder.

Reference Documents

The following documents are available:

- *Talari APN Glossary*
- *Talari APN Appliance E1000 Installation Guide*
- *Talari APN Appliance Quick Start Guide*
- *Talari WAN Implementation Guide*

Hardware and Software Requirements

Talari E1000 APN Appliances (APNAs) have the following hardware and software requirements:

Hardware:

E1000 appliances require a standard 19 inch (480mm) four-post or two-post rack for mounting.

Software:

The Talari Web Console is supported in latest versions of the following web browsers:

- Microsoft IE9 – IE11
- Mozilla Firefox
- Google Chrome

Supported browsers must have cookies enabled.

Supported browsers must have JavaScript installed and enabled.

Display:

A minimum screen resolution of 1024 x 960 or greater is recommended.

About the Appliance

The E1000 is an extension of the E-series of OracleTalari Appliances and intended for use in large branch or regional offices that require higher performance and port density than the E100 provides. The E1000 supports all major Talari Adaptive Private Network (APN) features, including Service Chaining and WAN Optimization.

IMPORTANT :

Your E1000 ships with a piece of foam behind the faceplate to prevent damage during shipping. The foam must be removed before powering on the appliance to avoid overheating the device. (Please refer to the Unpacking and Inspection checklist on page 6 for instructions.)

Talari APN Overview

Talari Networks is redefining WAN reliability and application performance with its family of APN Appliances by aggregating and transforming affordable broadband links to deliver business-class performance and reliability at consumer prices. Talari APN Appliances (APNAs) are seamlessly added to existing networks to deliver more bandwidth, reduced WAN operating expenses, and greater reliability than any existing single-provider WAN.

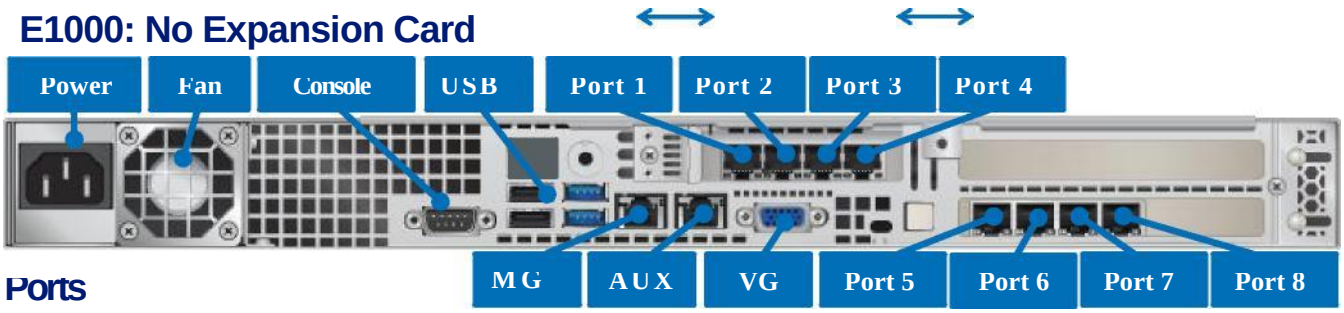
Using our patented Adaptive Private Network technology, Talari's solution combines diverse, abundant, affordable IP bandwidth sources, and provides reliable, resilient and high-quality connectivity between sites, insuring application continuity. Talari APNAs deployed in the main office and remote offices provide a network of Conduits between sites. Each Conduit is made of multiple WAN links and data transmitted across the Conduits is controlled and optimized to use network resources available across all WAN Links.

Front Panel Configuration

Rear Panel Configuration

The Talari E1000 may be ordered with **three different hardware options**. Installation will vary based on which E1000 hardware option is being deployed. Each E1000 hardware option can be visually identified by comparing the back of the appliance to the E1000 back panel images below. Where necessary, separate sub-sections for each hardware option are provided within this guide.

E1000: No Expansion Card



Port	Description
1	Gigabit Ethernet (Bypass pair with Port 2)
2	Gigabit Ethernet (Bypass pair with Port 1)
3	Gigabit Ethernet (Bypass pair with Port 4)
4	Gigabit Ethernet (Bypass pair with Port 3)
5	Gigabit Ethernet (Non-bypass)
6	Gigabit Ethernet (Non-bypass)
7	Gigabit Ethernet (Non-bypass)
8	Gigabit Ethernet (Non-bypass)
MGT	Dedicated management port.
AUX	Gigabit Ethernet (Non-bypass). Used for Manual Installation.
Console	DB9 console port (115200/8-N-1). Used for service and maintenance.
USB (4)	Used for service and maintenance.
VGA	Used for service and maintenance.

E1000: 10G Fiber (2 Port) Expansion Card

The E1000: 10G Fiber (2 Port) appliance (shown directly above) is identical to the E1000: No Expansion Card device (shown on page 4) with the addition of the following:

Port	Description
9	10 Gigabit Ethernet (Non-bypass)
10	10 Gigabit Ethernet (Non-bypass)

Note: The E1000 with 10G Fiber (2 Port) appliance does not ship with SFP modules. When ordering or using existing SFP modules with this appliance, the following SFP modules are supported in conjunction with the E1000 10G Fiber (2 Port) expansion card:

- FTLX8571D3BCVIT1 Dual Rate 10GBASE-SR/1000BASE-SX
- AFBR-709DMZ-IN2 Dual Rate 10GBASE-SR/1000BASE-SX
- FTLX1471D3BCVI31 Dual Rate 10GBASE-LR/1000BASE-LX

The 10G flex card is also compatible with direct-attach twinaxial cable that complies with SFF-8431 v4.1 and SFF-8472 v10.4 specifications.

E1000: Fail to Wire Copper (4 Port) Expansion Card

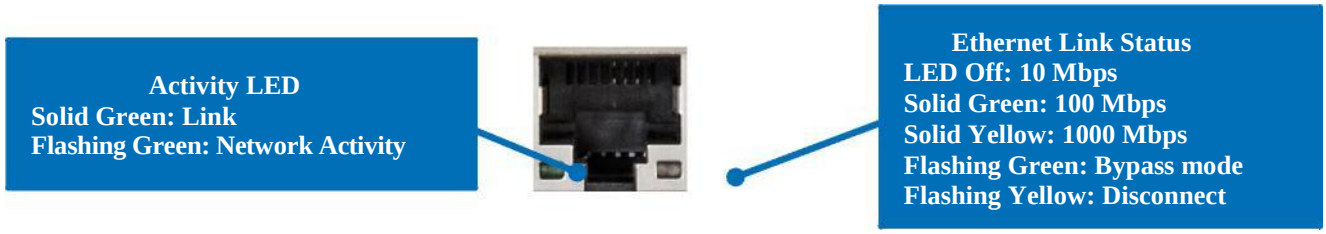
The E1000: Fail to Wire Copper (4 Port) appliance (shown directly above) is identical to the E1000: No Expansion Card appliance (shown on page 4) with the addition of the following:

Port	Description
9	1 Gigabit Ethernet (Bypass pair with port 10)
10	1 Gigabit Ethernet (Bypass pair with port 9)
11	1 Gigabit Ethernet (Bypass pair with port 12)
12	1 Gigabit Ethernet (Bypass pair with port 11)

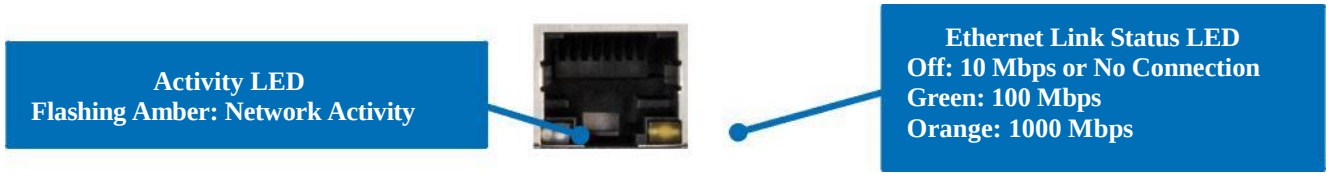
NIC Indicator Codes

All Ethernet ports on the E1000 have indicator lights for information on network activity and link status. Please note that the **indicator lights differ for the bypass and non-bypass ports**, as shown below:

Bypass Port Indicator Lights



Non-Bypass Port Indicator Lights



10G Fiber Port Indicator Lights

Hardware Specifications

The E1000 APNA has the following are the hardware specifications.

Specification

Power	600 Watt Platinum Efficiency Power Supply; 100-240V, 50-60 Hz			
Maximum Power Dissipation	**Staging**	**Startup**	**Idle**	**Load**
Watts	5.8	89.4	73.8	116.8
Amps	0	1.83	0.368	0.428
kVA	0.0058	0.0894	0.0738	0.1168
BTU/hr	19.79	305.03	251.81	398.52
Test Voltage	119.9	119.3	120.5	120.5
Physical Dimensions	EIA RS-310 standards 1U Height 1.7” (43mm) Width 17.2” (437mm) Depth 26.5” (650mm) Gross Weight 24 lbs (10.89kg)			
Mounting Options	Rack mount, rail kit (included)			
Link LEDs	Link activity Link speed			
Operating Temperature	41°F to 95°F (5° to 35°C)			
Storage Temperature	-40°F to 158°F (-40°C to 70°C)			
Humidity Range	8% to 90% (non-condensing) operating environment			
Capacity	10 individual Gigabit Ethernet Ports			
User interfaces	2 USB 2.0 ports 2 USB 3.0 ports 1 DB9 Console Port 1 VGA Port **E1000 without expansion card:** 10 individual Gigabit Ethernet ports **E1000 with 10G Fiber expansion card:** 10 individual Gigabit Ethernet ports, 2 individual 10 Gigabit ports **E1000 with FTW Copper expansion card:** 14 individual Gigabit Ethernet ports			

Mean Time Between Failure (MTBF) in Hours	186,834

Installing the Oracle Talari Appliance

Unpacking and Inspection

- ☐ Remove E1000 appliance and accessories from box.
- ☐ Remove E1000 from plastic wrapping.
- ☐ Inspect appliance for signs of damage.
- ☐ **Remove foam insert wedged between faceplate and inner front of appliance**
  by using thumbscrews on front of appliance to loosen faceplate. (Faceplate is hinged and will swing down. See *E1000 Front Panel* section for location of thumbscrews.)
- ☐ Remove warning stickers from top of appliance faceplate and power receptacle.
- ☐ Re-secure faceplate using thumbscrews.
- ☐ Confirm appliance has expected hardware option. (See *E1000 Back Panel* section to identify.)
- ☐ Ensure all accessories are included.

Rack Mounting

The E1000 ships with hardware for a 4-Post Rack mount, or a 2-Post Rack mount. The instructions below will provide the most efficient rack mounting of the device based upon selected rack type.

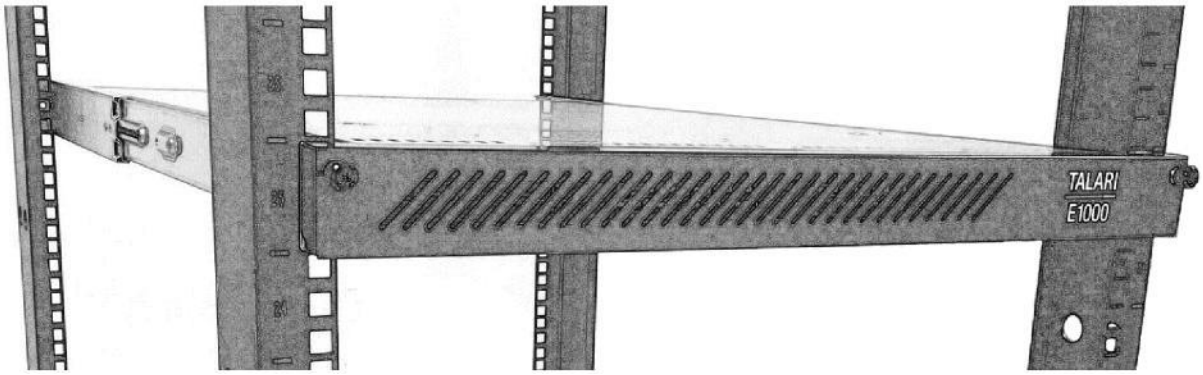
Safety Recommendations

Prior to installing the device in a rack, adhere to the following rack installation guidelines:

- Ensure that there is adequate airflow in the rack. Restricted airflow can damage the equipment.
- Leave at least 1U of vertical space between each device installed in the rack.
- The rack width and depth should allow for proper serviceability and cable management.
- Ensure the rack is properly secured to the floor or ceiling.
- Ensure the rack is properly grounded.
- Ensure the installer is properly grounded and wearing appropriate safety equipment.
- Always load the rack from the bottom up.
- Load the heaviest devices in the rack first.
- Make sure the rack is level and stable before pulling a device out of the rack.
- Do not move racks by yourself; at least two people are recommended to move a rack.
- Cables should be easily identifiable.

4-Post Rack Mounting (Recommended)

The 4-Post Rack mount of the E1000 is designed to be simple, and can be accomplished without the need for screws or brackets.



Layout & Required Components:

- 2x Front Outer Rails
- 2x Back Outer Rails

Assembly

1. Place the rails with the arrows indicating front and back of the device in the correct direction.

   Note: For both inner and outer rails for the E1000 it is important to ensure that they are pointing in the correct orientation (Front or Back) even if the arrows or the text are displayed upside down.

2. Place one of the Back Outer Rails on top of one of the Front Outer Rails and align the pegs (highlighted below in blue) with the matching holes (highlighted in green).

Figure 1: Pegs on Front Outer Rail

Figure 2: Peg on Back Outer Rail

3. Repeat with second set of rails.

Installation

3. Mount the assembled outer rails to the rack by using the self-locking arm locks on each end (highlighted below). Make sure the “Front” arrow is pointing towards the front of the rack and the “Back” arrow is pointing to the back of the rack. The rails will click into place.

Figure 3: Self-Locking Arm on Back Outer Rail

4. Carefully slide the E1000 onto the installed rails on the rack and push the device along the rails until you hear a click from the Side Rail Locks on both sides. Some slight resistance when sliding the appliance into the rack is expected and intended.

Removal

5. To remove the chassis pull the device forward out of the rack until the Side Rail Locks are visible.
6. Depress the Side Rail Locks (highlighted below) to allow the device to be unlocked from the rails.

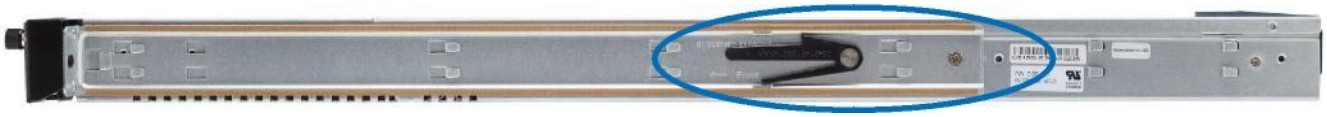
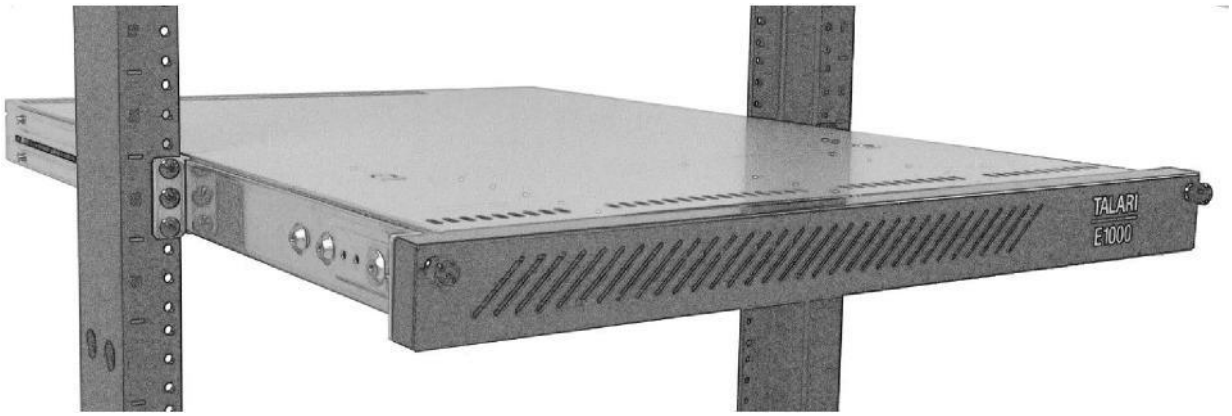


Figure 5: Side View of E1000 Showing Side Rail Locks

7. Remove chassis from rails.
8. Once chassis has been removed, rails can be unlocked from the rack by depressing the self-locking arm locks on each end of the outer rails (see Figures 3 and 4).

2-Post Rack Mounting



Layout & Required Components:

- 2x Front Outer Rails
- 2x Pre-Threaded (10-32) Brackets for 2-Post Racks

OR

- 2x Front Outer Rails
- 2x Non-Threaded Brackets for 2-Post Racks (For use with your own cage nuts and rack screws)

Assembly

1. Attach 1 selected mounting bracket to the raised oblong middle section of one of the Front Outer Rails with a short rounded screw (contained in rack mounting hardware bag). Ensure that the Front arrow on the bracket points towards the front of the rail.
    a. **Note:** The word “Limit” on the Front Outer Rail should still be visible once the bracket is joined to the Front Outer Rail.

2. Repeat with second Front Outer Rail.

Installation

9. Facing front of rack, install each assembled Front Outer Rail (with joined bracket) to the two post rack using rack screws (not provided).
10. Slide the E1000 onto the rail arms until you hear the click from the Side Rail Locks on the E1000 indicating proper installation.

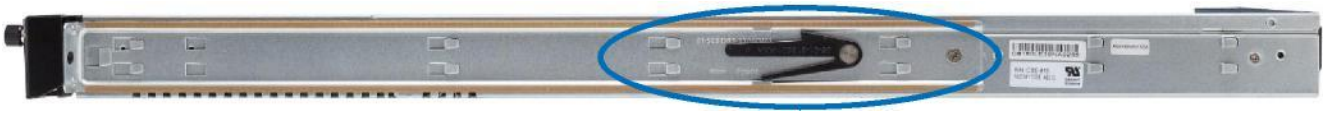


Figure 6: Side View of E1000 Showing Side Rail Locks

Removal

11. Pull side of device towards the front of the rack until the E1000 Side Rail Locks (see Figure 5) are exposed.
12. Depress the Side Rail Locks on both sides of the E1000 simultaneously and then continue to pull device forward until released from rails.

LAN/WAN Connections

When connecting each Ethernet cable (LAN, WAN) to the appropriate connector on the E1000:

- Position the cables carefully, so that they do not put strain on the connectors.
- Organize cables in bundles such that cables do not intertwine.
- Inspect the cables to make sure that the routing and bend radii are satisfactory. Reposition cables, if necessary.
- Install cable ties in accordance with site requirements.

Important Note About Cabling and Bypass Mode

If your Talari appliance is operating in bypass mode, logic used by the appliance represents the functionality provided by a crossover cable. This may cause a loss of the link between the Talari appliance and older network devices that do not support Auto-MDIX when straight-through cables are used to connect the LAN and WAN ports of the Talari appliance. In such a case, a crossover cable is required from the Talari WAN port to the network device.

If your network devices support Auto-MDIX capability, the link should be automatically established when in bypass mode and there should be no need for crossover cables. Talari recommends testing and verifying this capability with the Talari appliance powered off for proper operation.

For assistance, please contact your Talari representative, or the Talari Support team.

Powering Up the Appliance

When connecting power to the E1000:

- Plug the AC power cord into the appliance.
- Plug the AC power cord into an uninterrupted AC power source.
- The appliance will start automatically.

The E1000 uses 120-240 VAC.

Network Deployment Options

Before getting started it is important to determine how the E1000 will be deployed. When considering deployment options for the E1000, please note that **all bypass pairs will default to Fail-To-Block until configured otherwise**.

Example instructions for some of the most common deployment scenarios are provided below:

E1000 as a Router (Gateway, Fail to Block)

Description: The E1000 is deployed as the WAN gateway for the site, and bypass pairs are configured as Fail-To-Block. Use this design if you plan to use the Talari Appliance as the edge device for the site. Proceed to the pages below based on your installation method:

Easy 1st Install: Page 15
Manual Install: Page 17

E1000 as Layer 2 Fail-To-Wire (Overlay)

Description: The E1000 is deployed on the LAN side of the gateway, and bypass pairs are configured as Fail-To-Wire. Use this design if you prefer to retain existing edge devices or plan to install an alternative edge device on the WAN side of the Talari Appliance. Proceed to the pages below based on your installation method:

Easy 1st Install: Page 15
Manual Install: Page 17

E1000 with MPLS & Internet Hybrid

Description: The E1000 is deployed as an overlay for MPLS while performing routing/firewall capabilities for internet links. Use this design if recommended by your SA, or if you have an MPLS/Internet hybrid network and will not be using the CE Router Replacement functionality of the Talari APN. Proceed to the pages below based on your installation method:

Easy 1st Install: Page 15
Manual Install: Page 17

Other Options

There are other deployment options, and our Talari Implementation team members will assist you with planning and deploying your new appliance.

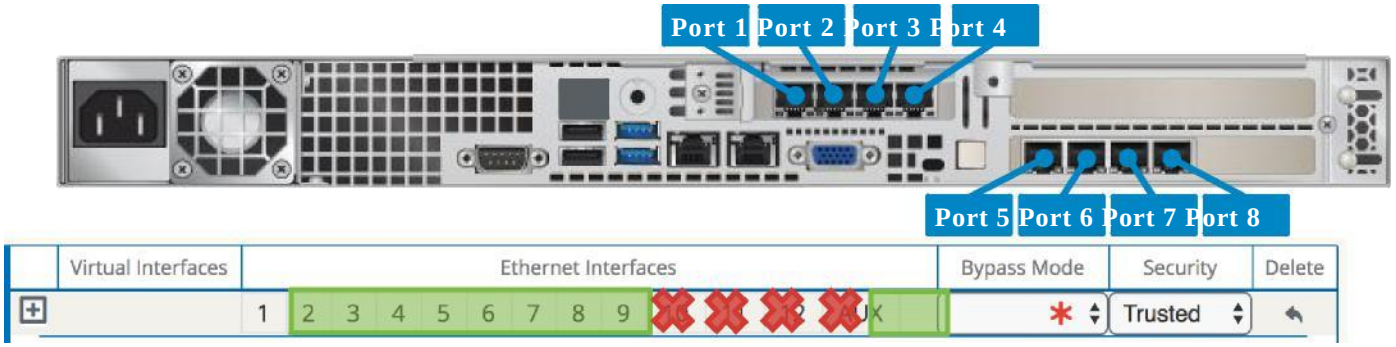
Deploying the E1000 APN Appliance

Easy 1st Install

Important Note:

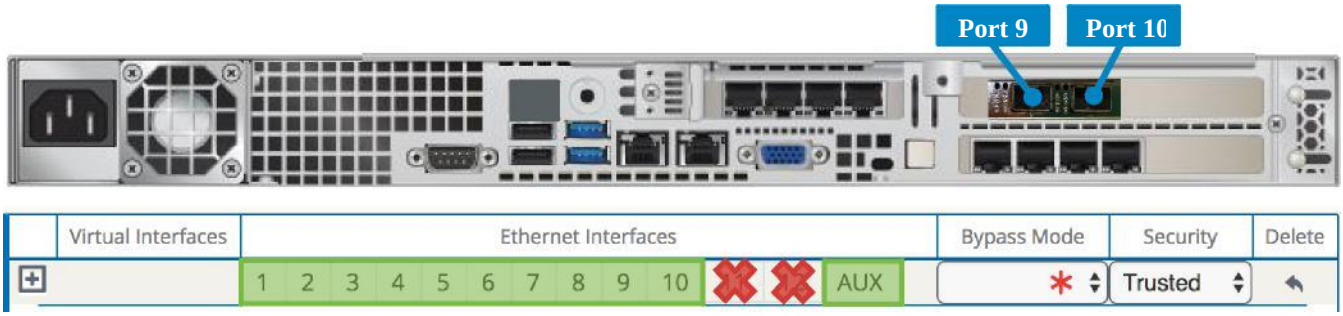
If the Talari configuration for the E1000 does not match the installed hardware (for example, if the appliance is an E1000 with No Expansion Card and an interface between 9 and 12 is configured), the Talari service will not start when the package is applied, and the appliance will need to be factory defaulted before Easy 1st Install can be attempted again. Valid ports for each hardware option are highlighted in green below, while invalid ports are indicated with a red symbol:

E1000 with No Expansion Card:



Port 1: Gigabit Ethernet (Bypass pair with Port 2)
Port 2: Gigabit Ethernet (Bypass pair with Port 1)
Port 3: Gigabit Ethernet (Bypass pair with Port 4)
Port 4: Gigabit Ethernet (Bypass pair with Port 3)
Port 5: Gigabit Ethernet (non-bypass)
Port 6: Gigabit Ethernet (non-bypass)
Port 7: Gigabit Ethernet (non-bypass)
Port 8: Gigabit Ethernet (non-bypass)

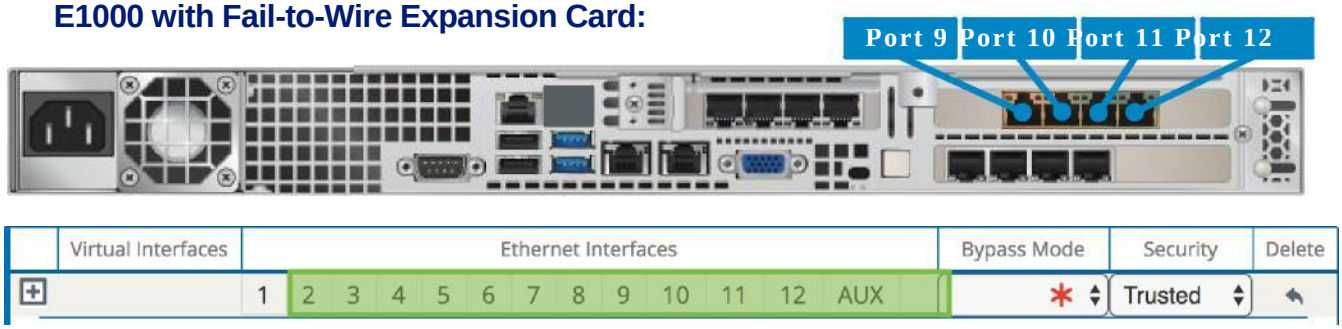
E1000 with 10G Fiber Expansion Card:



Port 9: 10 Gigabit Ethernet (non-bypass)
Port 10: 10 Gigabit Ethernet (non-bypass)

Note: Ports 9 and 10 should only be configured with Bypass Mode set as Fail-to-Block on an E1000 with 10G Fiber expansion card. The 10G Fiber expansion card does not support Fail-to-Wire, and the Talari service will not start if a configuration specifying Fail-to-Wire for these ports is applied to an E1000 with 10G expansion card.

E1000 with Fail-to-Wire Expansion Card:



Port 9: Gigabit Ethernet (Bypass pair with Port 10)
Port 10: Gigabit Ethernet (Bypass pair with Port 9)
Port 11: Gigabit Ethernet (Bypass pair with Port 12)
Port 12: Gigabit Ethernet (Bypass pair with Port 11)

Note: Ports 9 and 10 may be configured in either Bypass Mode on an E1000 with Fail-to-Wire expansion card, as may ports 11 and 12.

Site Deployment Criteria:

NCN:

- Easy 1st Install can be used once the Network Control Node (NCN) has been set up for your network. If the E1000 being deployed is intended to become the NCN, please see the instructions for manual installation.
- Active Appliance Package: The NCN must be running an active configuration which includes the E1000 for the site being installed.

Client Site Connectivity:

- Internet, DHCP, and DNS connectivity to the management interface are required to use Easy 1st Install. If one or more are not available, please see the instructions for manual installation.
- Cable the LAN and WAN ports in accordance with the Talari configuration for the site.

Use NCN to Upload Client Package to Registration Server:

13. Log in to the Web Console of the NCN.
14. Navigate to **Manage Network > Appliance Installation.**
15. Locate the Site name of the E1000 being deployed.
16. Click the Edit pencil to open the Set Serial Number window.
17. Enter the serial number of the E1000 being deployed and click the Set Serial Number button. (Refer to Page 5 for assistance locating the serial number.)
18. Observe the **Upload/Activate** column. Click the **Upload/Activate** text when it appears.
19. Continue to observe the **Upload/Activate** column. Once the text reads **Upload Complete**, proceed to the next section.

Deploy the Talari Appliance:

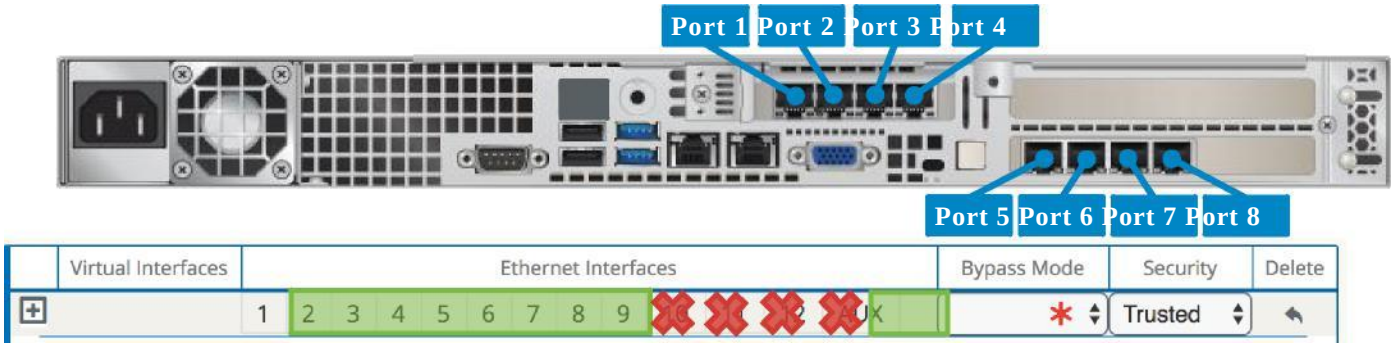
20. Ensure that the appliance management interface is cabled for Internet connectivity.
21. Connect the power cord to the E1000. Connect the other end to an appropriately grounded power source. The E1000 will power on automatically.
22. The E1000 will begin the Easy 1st Install process. Please allow up to ten minutes for the process to complete. (From the NCN Web Console, observe the **Manage Network > Appliance Installation** page for status updates during installation.)
23. Once the Easy 1st Install process has completed, the Talari service will automatically be enabled.

Manual Install

Important Note:

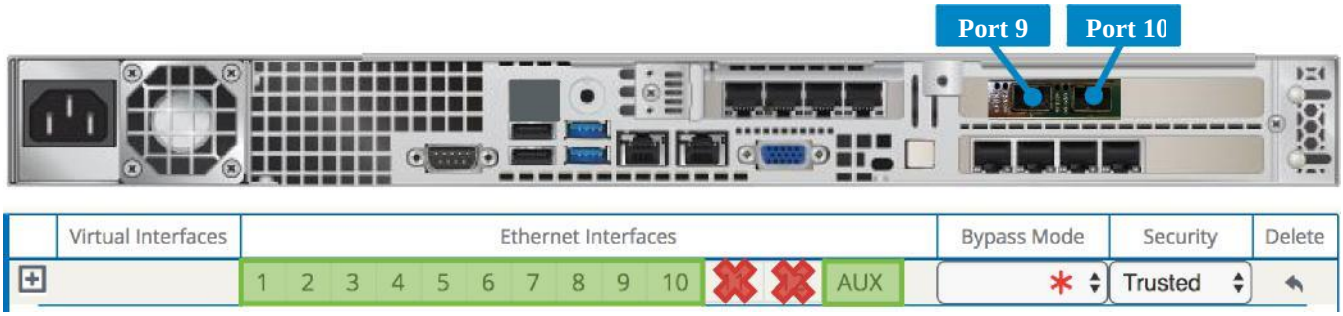
If the Talari configuration for the E1000 does not match the installed hardware (for example, if the appliance is an E1000-Base and an interface between 9 and 12 is configured), the Talari service will not start when the package is applied. A corrected package will have to be uploaded via Local Change Management (as outlined in steps 4-7 of Deploying the Talari Appliance) to bring up the Talari service.

E1000 with No Expansion Card:



Port 1: Gigabit Ethernet (Bypass pair with Port 2)
Port 2: Gigabit Ethernet (Bypass pair with Port 1)
Port 3: Gigabit Ethernet (Bypass pair with Port 4)
Port 4: Gigabit Ethernet (Bypass pair with Port 3)
Port 5: Gigabit Ethernet (non-bypass)
Port 6: Gigabit Ethernet (non-bypass)
Port 7: Gigabit Ethernet (non-bypass)
Port 8: Gigabit Ethernet (non-bypass)

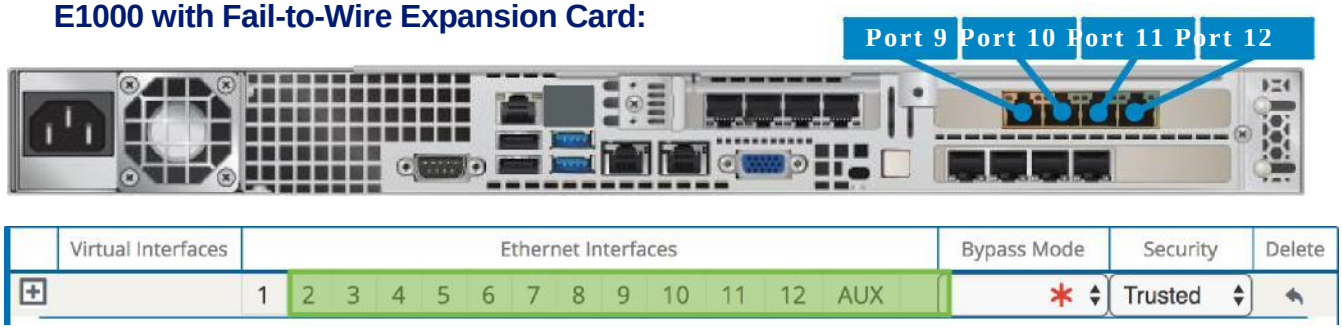
E1000 with 10G Fiber Expansion Card:



Port 9: 10 Gigabit Ethernet (non-bypass)
Port 10: 10 Gigabit Ethernet (non-bypass)

Note: Ports 9 and 10 should only be configured with Bypass Mode set as Fail-to-Block on an E1000 with 10G Fiber expansion card. The 10G Fiber expansion card does not support Fail-to-Wire, and the Talari service will not start if a configuration specifying Fail-to-Wire for these ports is applied to an E1000 with 10G expansion card.

E1000 with Fail-to-Wire Expansion Card:



Port 9: Gigabit Ethernet (Bypass pair with Port 10)
Port 10: Gigabit Ethernet (Bypass pair with Port 9)
Port 11: Gigabit Ethernet (Bypass pair with Port 12)
Port 12: Gigabit Ethernet (Bypass pair with Port 11)

Note: Ports 9 and 10 may be configured in either Bypass Mode on an E1000 with Fail-to-Wire expansion card, as may ports 11 and 12.

Site Deployment Criteria:

Manual (Legacy) Install requires physical access to the appliance. The end user will require a PC which can be connected directly to the AUX port of the Talari Appliance via an Ethernet cable.

Cable the LAN and WAN ports in accordance with the Talari configuration for the site.

Pre-Deployment Requirements:

The network administrator must have an active configuration which includes a client package for this site running on the NCN. An appropriate IP address, subnet mask, and gateway for the management interface should be provided for the on-site user to configure.

If the network administrator will have access to the new appliance once an on-site user configures the management interface, proceed to step 4 of Deploying the Talari Appliance. If not, the on-site user will require the client package from the running configuration:

1. From the Web Console of the NCN, navigate to **Manage Network > Change Management.**
2. Download the active package for the new client site.
3. Send the zipped client package to the on-site user who will be deploying the appliance.

Deploying the Talari Appliance:

1. Connect the power cord to the E1000. Connect the other end to an appropriately grounded power source. The E1000 will power on automatically.
2. Connect your PC directly to the AUX Port of the E1000.
3. From the PC connected to the Talari:
   a. Change the IP address of your PC to 192.168.0.1.
   b. Change the Subnet Mask of your PC to 255.255.255.252.
   c. Open a web browser and go to the Talari web console at 192.168.0.2. The username is *talariuser* and the default password is *talari*. **We strongly recommend changing the default password as soon as possible.**
   d. Select **Manage Appliance > Local Network Settings** from the pull-down menu.
   e. Set the IP Address, Subnet Mask, and Gateway IP Address for the Talari as provided by your network administrator.
   f. Click Change Settings. If your network administrator will be applying the configuration package, you may now restore the original network settings on your PC.
4. To apply the configuration package, navigate to **Manage Appliance > Local Change Management**.
5. Click Browse and select the .zip package provided by your network administrator, then click Upload.
6. When the upload is complete, click Next to proceed to activation.
7. Click Activate Staged to complete the process. You may now restore the original network settings on your PC.

Troubleshooting

The Reset and Power buttons are located behind the faceplate of the appliance, and **should only be used under the direction of Talari Support**. To access the Reset or Power Buttons, the E1000 faceplate will need to be removed using the thumb screws:

Loosen the thumb screws fully. Fully loosened thumb screws should rebound slightly when pressed towards the device and then released. Once fully loosened, gently use the thumb screws to pull the removable faceplate away and down from the device. Pivot the E1000 faceplate down on the built-in hinge (underneath the faceplate) as shown above.

Appliance Troubleshooting Basics

Problem	Resolution
Cannot ping the E100 APN appliance	Make sure the appliance has power. Confirm the device has a Management IP address assigned. Verify the Management port has link on the Talari and switch.
Ethernet port not forwarding traffic	Verify the switch has auto-negotiation enabled. Verify the switch has the port enabled. Confirm you connected to the correct port on the Talari.
Cannot access the Talari APNA Web Console	Confirm you are using the correct IP address. Confirm the management port of the E1000 APNA is connected to a switch and there is activity.

Troubleshooting Inline Mode (Fail-to-Wire)

The E100 APNA is equipped with a capability known as Inline mode with the interfaces in Fail-to-Wire. This capability is designed to prevent a single point of failure. If there is a serious problem with the E100 APNA, the bypass pair goes into bypass mode and forwards traffic through as though the appliance were a wire.

Interfaces may be configured as either Fail-to-Wire or Fail-to-Block. If a bypass pair is configured for Fail-to-Block, bypass mode will never be activated, even if power is lost.

If configured, bypass mode is used when the APNA is not powered on or when the Talari Service is disabled.

Please also see the section above, “Important Note About Cabling and Bypass Mode”.

Problem	Resolution
Bypass mode blocking traffic	Verify that the E100 APN appliance has connectivity to the L2/L3 devices on its LAN/WAN ports. Verify that the correct cables are used and that the networking devices have auto-negotiate set for their ports.
E100 stays in bypass mode	Confirm that the E100 is configured properly and that the Talari Service is enabled.